BEFORE THE STATE OF WASHINGTON

ENERGY FACILITY SITE EVAUATION COUNCIL

In the Matter of Application No. 2003-01: SAGEBRUSH POWER PARTNERS, LLC; KITTITAS VALLEY WIND POWER PROJECT	EXHIBIT 38 (MB-T)

APPLICANT'S PREFILED DIRECT TESTIMONY
WITNESS # 19: MICHAEL BERNAY

Q Please state your name and business address.

A My name is Michael Bernay and my business address is 3101 W. Coast Hwy; Newport Beach, CA 92663.

Q What is your present occupation, profession; and what are your duties and responsibilities?

A I am the Executive Vice President of WorldLink Specialty Insurance Services. We are an insurance broker specializing in the design, development and management of insurance programs for various industries including wind power projects. I have responsibilities for the day to day operations of our programs. Our largest single program based on premium volume is

DARREL L. PEEPLES
ATTORNEY AT LAW
325 WASHINGTON ST. NE #440
OLYMPIA, WA 98506
TEL. (360) 943-9528 FAX (360) 943-1611
dpeeples@ix.netcom.com

WindPro which is designed specifically for developers, contractors, owners, operators and manufacturers of wind power projects and the wind industry.

Q Would you please identify what has been marked for identification as Exhibit 38-1 (MB-1).

A Exhibit 38-1 (MB-1) is a résumé of my educational background, expertise and employment experience.

Q. Would you please briefly describe your expertise and qualifications, including your history involving wind facilities such as the Kittitas Valley Wind Power Project.

A I have been involved with the placement of insurance of wind power projects since 1985. WindPro is presently the largest single Insurance Facility in the world offering coverage to wind power projects.

Q How many wind turbines has Wind Pro presently insure?

A. We presently insure more than 6,000 MW of wind energy for a total of more than 18,000 wind turbines.

Q Please generally describe where the wind turbines insured by Wind Pro are located.

A We presently insure wind turbines in 20 countries around the world including the United States, where we insure wind projects in 25 different states.

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Q What approximate percentage of all wind turbines in the U.S. does Wind Pro insure?

A We presently insure approximately 60% of the 3rd party insured wind power projects in the US.

Q Please describe the types of wind power projects that your firm does not insure.

A Some wind power projects are owned by corporations which carry a larger insurance plan and for such projects, they often times will place their wind power project into their corporate program that includes a number of other exposures. For these types of projects, we are often still involved to provide insurance during the construction phase.

Q Would you please describe the history of the technological improvements in wind turbines you have observed in your career?

A It is common to refer to the wind industry as having experienced 5 generations of technology here in the US. The "First Generation" was the Early to Mid- 1980. Projects used smaller machines (25-45 kW rating) that were not very dependable by today's standards.

The "Second Generation" was the mid to late 1980's. The machines became a bit larger (65 to 120 kW in rating), but the technology was still less reliable than today's technology. Many of the Second Generation turbines were retrofitted with more reliable operating systems and components and some were retrofitted with slightly taller towers to improve energy capture.

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The "Third Generation" of turbines started arriving in the US in the early 1990's with increasingly larger machines with nameplate ratings of a few hundred kilowatts (200-300 kW) and up. Although the Third Generation machines were more expensive, they generated significantly more energy and revenues on a per KW basis than any of the earlier generations. With this third generation of larger, more reliable and costly machines, far more time and money were spent improving on overall project maintenance and safety programs, as the value of their assets increased and represented significant investments.

The "Fourth Generation" of turbines began arriving in the US in 1994. The nameplate capacity of the turbines continued to increase to the half or ¾ MW range (500-750 kW). Improvements in turbine design were significant with more sophisticated and powerful microprocessor based control systems, more rugged blade and drive train construction, and improved blade aerodynamics. The size of an average wind power project increased and developers and owners started to use more conventional financing structures that were formerly not possible with the earlier, smaller turbines and smaller project capital investments.

The 'Fifth Generation" of wind turbines started arriving in the US in 1999–2000 and are commonly called "MegaWatt Class" turbines. Projects started using turbines with ratings of 1 MW (1,000 kW) and above. The introduction of these larger, more efficient and highly reliable machines resulted in significant energy production cost savings and wind energy started to reach 3 to 4 cents per kWh range in regions with an adequate wind resource. Manufacturing and design improvements to the blades, towers, lightning

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protection systems, gearboxes, drive trains, etc. resulted in manufacturers providing availability and performance guarantees exceeding 95% for their equipment.

Q Please describe your familiarity with the certification of wind turbines and its importance to your industry.

A Independent, third party certification is very important to the insurance industry. We require that all turbines are certified by a third party in order to qualify for our insurance programs. Having a third party certification means that a turbine has been scrutinized according to a set of industry standards, typically IEC (International Electrotechnical Commission) and other safety, quality and design codes to ensure that it complies in the way that is was engineered, designed, tested, manufactured, installed and operated.

Q What do you mean by "certification"?

A Certification is like a stamp of approval. The certificate is issued by an independent third party reviewing group or certifying agency. The certification process for wind turbines is rigorous and includes scrutiny of many aspects of the wind turbine including its design, engineering analysis, review of compliance with safety codes and standards, testing verifications for noise, and performance, manufacturing, and commissioning and operations procedures to mention a few.

Q What is the purpose of certification?

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A Certification provides assurances that the turbine is made according to specification, complies with well proven codes and standards and will continue to operate safely and efficiently for years to come.

Q Who provides the certification?

A The most established and experienced third party certifying groups for wind turbines are Germanisher Lloyd of Germany, RISØ of Denmark and Det Norske Veritas of Norway. These groups have expertise in the design, engineering, manufacturing, testing and safety compliance regarding large equipment. Underwriters Laboratories (UL) in the USA has just started to offer their certification for turbines, however, they presently have far less experience than their European counterparts.

Q What are the types of liabilities for which you provide insurance for wind power projects?

A Our firm provides all first party and third party liabilities.

Q How many third party claims has Wind Pro received?

A There have been 2 third party claims that have been processed and paid since we have been in business.

Q What was the nature of these claims?

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A The claims were made by landowners and were related to brush fires.

Q What was the cause of the fires?

A One incident was caused by a discarded cigarette. The other incident was caused by some field welding that was performed near an older wind turbine.

Q Please describe other types claims related to wind turbines?

A. The majority of claims are those for lost revenues or business interruption made by the owners of wind projects, or first party claims. Some examples of the causes of these business interruptions are lightning damage or electro-mechanical failures on facilities which are not under the control of the project owners (such as sub-stations and transmission lines) that cause extended periods of downtime and revenue loss. The majority of our losses are due to lightning, accounting for more than 50% of our claims. Our largest single loss occurred as a single point failure due to the mechanical breakdown of a substation which was being shared by three different projects to deliver power to the grid.

Q What are the types of conditions that appear to result in a higher lightning strike probability?

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A Most of the lightning damage claims occur on projects with older turbines located in areas with a combination of many turbines and frequent thunder and lightning storms.

Q Describe the type of damages caused by lightning.

A Although the blades of modern turbines are very large and well designed, a powerful lightning strike can damage the blade and take the turbine out of commission preventing the turbine from generating power. As a result, the blade has to be replaced.

Q How much do blades cost?

A Blades cost depends on the size of the turbine. A typical blade cost for MW scale turbines is approximately $250,000.

Q Has there been a reduction in the number of lightning damage claims made for project with the newer generations of wind turbines?

A Yes. The number of lightning damage insurance claims is far less on the new turbines. The turbine manufacturers have spent a lot of time and resources testing and developing more sophisticated lightning protection systems.

Q Has Wind Pro ever had a claim for the collapse of a wind turbine tower?

A No.

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Q Has Wind Pro ever had a claim for a wind turbine throwing ice?

A No.

Q Has Wind Pro ever had a claim for a wind turbine losing a blade?

A Yes. This happened on an older second generation turbine from the 1980s.

Q Please describe what happened?

A The Turbine was in a runaway situation, which means it did not shut off properly when the brake system was applied. Turbines will shut themselves off if the wind is too strong. This particular one did not. In this instance employees of the project decided to take a parachute that was in the storage area and throw it over the blades from a boom truck to bring it to a stop. Instead the rotor continued to run and the parachute broke off the blade and the blade was thrown about 10 yards from the turbine. There was no damage from the thrown blade, other than the blade itself.

Q Is this the only situation Wind Pro has had regarding a blade that became detached?

A Yes.

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Q Do new turbines, such as the type that will be installed for the Kittitas Valley Wind Power project have problems with blade throws, ice throws or tower collapses?

A No.

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EXHIBIT 38-1 (MBy-1)

Michael J. Bernay

433 Tustin Newport Beach, Ca 92663 949-439-6875

HIGHLIGHTS OF QUALIFICATIONS

- 25 years experience in the commercial insurance industry, including both insurance company and broker experience.
- Presently manage the program department for WorldLink Insurance Services which is in excess of $30,000,000 in premium
- Responsible for the WindPro insurance facility that is placed in Lloyds of London. WindPro writes wind business in 25 countries around the world and is presently the largest single broker of wind energy business.
- Started writing wind business in 1985-86 in California during the first generation of wind energy.

WORK HISTORY

1996-Present	Executive Vice President	WorldLink Insurance Services, Newport Beach, Ca.
1992-96	Vice President/Manager	Randall Louis Insurance, Irvine, Ca.
1985-92	Vice President/ Branch Manager	Pacific Insurance Agency, Irvine, Ca.
1982-85	Account Executive	Olliver-Pilcher Insurance, Phoenix, Az.
1979-82	Account Manager	Reed Stenhouse, Boston, Ma.
1978-79	Claims and Underwriting	Commercial Union Assurance, Boston, Ma.

SPECIALIZED TRAINING AND EDUCATION

Commercial Union Assurance Co: Claims and Underwriting Management Training Program

Certified Insurance Counselor

B.A./A.B, Williams College, Williamstown, Ma. 1978